UNITED STATES
AIR FORCE

OCCUPATIONAL SURVEY REPORT

CARDIOPULMONARY LABORATORY

AFSC 4H0X1

OSSN: 2541

February 2004

OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
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PREFACE

This report presents the results of an Air Force Occupational Survey of the Cardiopulmonary Laboratory career ladder (AFSC 4H0X1). Authority for conducting an occupational survey is contained in AFI 36-2623. Copies of this report and pertinent computer printouts are distributed to the Air Force Career Field Manager, technical training school, all major using commands, and other interested operations and training officials.

Second Lieutenant Laura McDonald, Occupational Analyst, developed the survey instrument, analyzed the data, and wrote the final report. Ms. Jeanie Guesman provided computer-programming support, and Ms. Sherry Evans provided administrative support. Major Jose Caussade, Chief, Enlisted Analysis Section, reviewed and approved this report for release.

Additional copies of this report may be obtained by writing to AFOMS/OAOD, 1550 5th Street East, Randolph AFB TX 78150-4449, or by calling DSN 487-5543. For information on the Air Force occupational survey process or other on-going projects, visit our website at https://www-r.omsq.af.mil/. (Note: If you experience a Microsoft Word security problem after clicking on the above link, please copy the web address into the Address window in your web browser.)

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OCCUPATIONAL SURVEY
CARDIOPULMONARY LABORATORY
(AFSC 4H0X1)

EXECUTIVE SUMMARY

1. Survey Coverage: The Cardiopulmonary Laboratory career ladder was surveyed to obtain current task and equipment data for use in evaluating current training programs. The data will also be used to support specialty knowledge test (SKT) development. Surveys were sent to 208 active duty (AD) personnel. Survey results were based on 109 members responding.

2. Specialty Jobs: Job structure analysis identified one cluster and one independent job within the career ladder. This career ladder is very homogeneous, with the vast majority of the members performing similar tasks within the respiratory therapy, pulmonary, cardiovascular, and polysomnogram arenas. All 3-skill-level members were identified within the Cardiopulmonary Cluster with the majority (60%) of members in the Respiratory Therapy Job. Within the Pulmonary Laboratory Job, 3-skill-level members make up the majority of members (20%). On average, personnel in the NCOIC Job perform the most tasks (163) in the career ladder because, in addition to technical tasks, they are performing supervisory tasks. The NCOIC Job and Supervision and Training IJ mainly comprise 5-, 7-, and 9-skill-level members.

3. Career Ladder Progression: The Cardiopulmonary Laboratory career ladder progression is typical of most career ladders. Personnel at the 3- and 5-skill levels work in the technical jobs and spend most of their time on technical tasks. As incumbents move up to the 7-skill level, they begin to perform supervisory tasks but still spend some of their time performing the technical tasks.

4. Training Analysis: The specialty training standard (STS) for the specialty, dated May 2001, was reviewed against the survey data. The STS is generally well supported by the survey data with less than 15 items unsupported.

5. Job Satisfaction Analysis: The lowest levels of job satisfaction in AFSC 4H0X1 were found in the first-enlistment personnel group. However, most members across all specialty jobs and TAFMS groups report good use of training received. Within the Cardiopulmonary Cluster, the highest job interest was identified within the NCOIC Job. Across all clusters and jobs, over 50% of these airmen plan to reenlist.

6. Retention Dimensions: Members in the three TAFMS groups (1-48 months' TAFMS, 49-96 months' TAFMS, and 97+ months' TAFMS) agreed on several factors potentially influencing their decision to reenlist or separate. Top factors for reenlistment included "job security", "retirement benefits", and "medical or dental care for family members." The three TAFMS groups also agreed on several top factors for separation, which included "unit manning", "recognition of efforts", and "civilian job opportunities."

INTRODUCTION

Air Force Occupational Measurement Squadron (AFOMS)

Occupational Analysis Program

Our mission is to provide occupational data for decision makers, allowing them to make informed personnel, training, and education decisions, based not on opinion and conjecture, but on empirical, quantitative data.

Survey Development Process

An occupational survey begins with a job inventory (JI) -- a list of all the tasks performed by members of a given Air Force Specialty Code (AFSC) as part of their actual career field work (that is, additional duties and the like are not included). We include every function that career field members perform by working with technical training personnel and operational subject-matter experts (SMEs) to produce a task list that is complete and understandable to the typical job incumbent. The SMEs write each task to the same level of specificity across duty areas, and no task is duplicated in the task list.

In addition to this comprehensive task list, job inventories include a number of background questions that deal with demographic information, job satisfaction, equipment usage, and any other area that our customers, such as career field managers (CFMs) and technical school personnel, may request.

Furthermore, the JI is only one of the survey instruments that AFOMS produces. The JI task list is used in creating several other surveys that are important for developing and refining career field training programs and for developing career field promotion tests; these surveys and how their results are used will be described later in this report.

Survey respondents are asked to examine all tasks in the JI and select each task that they perform in their present job. They are then asked to rate each task they chose on a scale of 1 to 9 according to how much relative time they spend performing that task in their present job, compared to all the other tasks in the inventory. These ratings are converted into estimates of actual relative job time spent performing each task.

Survey Analysis

Survey responses are processed using a set of computer programs called the Comprehensive Occupational Data Analysis Programs (CODAP). We are able to calculate some important basic information about each task from the information that respondents provide in the JI: the percent members performing (PMP) and the percent time spent (PTS). CODAP forms groups of survey respondents according to the similarity of their task performance, and our analysts study these groupings to identify distinct jobs. Further, we can provide PMP and PTS information for any subgroup. For example, we can easily determine the percent of E-5s or 3-skill-level or first-term

airmen who perform each task, and estimate the average amount of job time they spend performing it. This is important because many of the applications of our data target particular subgroups within the career ladder.

Uses of Survey Data

Survey results are formally reported in an **occupational survey report (OSR)**. The OSR is by no means the only product of an occupational survey study. The OSR provides a high-level "snapshot" of an entire AFSC in a compact package, but it is not intended to provide the comprehensive information needed to support important decisions about a career field. That is the purpose of "data extracts," which are comprehensive, detailed sets of CODAP-generated reports designed for particular applications.

The Training Extract -- AFOMS survey data are essential to technical training personnel. The training extract provides information about what career ladder incumbents are actually doing in their jobs at each stage of their career, along with supporting information regarding when and how members should be trained to perform their jobs. The data found in the training extract regarding first-term and 3-skill-level members are the *primary source of empirical information* available to support such decisions.

In addition to the JI, AFOMS produces two other surveys that directly support the training community. Depending on the size of the career ladder, a sample of at least 50 (and frequently 100 or more) 7-skill-level craftsmen is selected to complete a training emphasis (TE) survey. A similar-sized sample of other 7-skill-level craftsmen is selected to complete a task difficulty (TD) survey.

The TE survey, like the JI, contains the complete career ladder task list, and, like the JI, respondents are asked to rate tasks on a 1 to 9 scale (tasks not rated by the respondent are assigned a "0" rating). Unlike the JI, however, respondents are asked to rate tasks based on how much emphasis they believe should be placed on that task for entry-level structured training. A "1" rating indicates the respondent's belief that very little emphasis be placed on providing structured training on that task. A rating of "9" indicates that it is essential to provide structured training on the task. Structured training is defined as resident technical schools, field training detachments, mobile training teams, formal on-the-job training (OJT), or any other organized training method. The responses of the entire sample of raters are averaged for each task, and the result is a TE rating for each task.

The TD survey also contains the full task list and requests that respondents rate each task *with which they are familiar* on a scale of 1 to 9 ("1" is low, "9" is high), but this time respondents are asked to rate the amount of time needed to learn to perform that task satisfactorily. In other words, as the name implies, TD is an indicator of how difficult the task is to perform. The average TD rating for each task in the inventory is standardized with a mean rating of 5.0 and a standard deviation of 1.0.

When used in conjunction with the PMP and PTS for first-enlistment members, average TE and TD ratings provide insight into the appropriate training requirements for new personnel in the career ladder. These four indices (PMP, PTS, TE, and TD) are used to compute a composite index, the automated training indicator (ATI), for each task. The ATI expresses, in a single number between 1 and 18, the most appropriate training setting and approach for providing training for that task. ATIs allow training developers quickly to focus attention on those tasks that are most likely to qualify for resident course consideration. Further information concerning TE and TD ratings and ATIs for the entire task list can be found in the training extract that accompanies this OSR.

The major users of training extract information are attendees at utilization and training workshops (U&TWs). The U&TW is a summit of representative career ladder, training, and classification leaders who evaluate current training efficiency and effectiveness in order to propose and approve changes to the specialty training standard (STS) or course training standard (CTS), particularly with regard to 3-skill-level training, and to address utilization issues. The AFSC's job description in Attachment 6 of AFMAN 36-2108, *Enlisted Classification*, is also reviewed and appropriately revised in light of the survey data to reflect the jobs being performed by the career ladder members.

Part of the process of compiling the training extract involves the *STS matching* process, during which technical school personnel match JI tasks to STS elements; that is, they tell us what particular task or tasks correspond to each STS element when it is covered in training. This is especially useful when STS performance codes are being reviewed for the 3-skill-level course. For example, the U&TW attendees might be asked to consider adding a task performance code to an STS element that previously has been trained only to a knowledge level. JI, TE, and TD data, combined in the form of the ATI, are important in determining the appropriate proficiency code. Separate training extracts are produced for active duty (AD), Air National Guard (ANG), and Air Force Reserve Component (AFRC) members.

The Specialty Knowledge Test (SKT) Extract -- AFOMS survey data are key to ensuring that SKTs are valid. SKTs are an important part of the Weighted Airman Promotion System (WAPS). Since an airman's test score is frequently the deciding factor in determining who is promoted, SKTs must be valid, fair, and credible.

In terms of SKTs, *valid* means that every question on the test is tied to a task which has been shown to be important to successful performance in the specialty. This tie is crucial to documenting the validity of SKT content.

AFOMS surveys provide test writers with information on the PMP, PTS, TD, and TE. This information is combined to produce a composite index called the predicted testing importance (PTI). Those tasks that are rated highest in PTI are ones that tend to be high in all four of our primary indices -- PMP, PTS, TD, and TE -- exactly the kinds of tasks that one would generally consider job-essential and that should form the basis for test questions. PTI information is used for minor test revisions; how it is used will be explained shortly.

Field-validated testing importance (FVTI) data are produced for major test revisions. Approximately 6 months before the start of test development, a sample of 100 senior career field NCOs is sent a survey containing a list of the 150-200 tasks rated highest in PTI. Respondents are asked to provide a 1-7 rating (“1” is low, “7” is high) of how important they believe it is to include a question concerning that task on the SKT. The responses are averaged for each task, yielding the FVTI index -- a direct measure of the opinions of career field experts as to what constitutes "job-essential" knowledge.

PTI and FVTI information is included in the SKT extract, which is specifically tailored for use by the SKT teams who come to AFOMS to write the promotion examinations. Two sets of reports are prepared -- one set uses only data for E-5s and the other uses combined data for E-6s and E-7s. Each report gives the SKT team information on every task's PMP, PTS, and PTI, and, for major test revisions, FVTI data. Occupational survey data are thus the only objective source of information available to the team regarding how to make the test they write meet legal requirements for validity and fairness.

The Analysis Extract -- The analysis extract is an archive of all the data collected in the course of a study that are not incorporated into one of the other extracts. We typically produce separate analysis extracts for AD and ANG/AFRC members. The analysis extract is usually an enormous document, a compilation of the many reports that "slice and dice" the data in virtually every potentially useful way. Just about any question anyone has regarding career ladder work, personnel, or training and utilization issues can be answered by consulting one or another of the reports in the analysis extract.

The Occupational Survey Report -- The OSR captures survey data and analysis both in breadth and depth. For ease of reading, the first half of the OSR concentrates on breadth with compelling factors and implications across the specialty. Tables following the narrative show depth with regard to these factors and implications. Where appropriate, highlights of the tables are contained in the body.

OCCUPATIONAL SURVEY REPORT (OSR)
CARDIOPULMONARY LABORATORY
(AFSC 4H0X1)

This is a report of an occupational survey of the Cardiopulmonary Laboratory career ladder, conducted by the Occupational Analysis Flight, AFOMS. The OSR reports the findings of current data that are available for use in guiding the development and evaluation of training and support planned changes within this career ladder. In addition, the data are used to support SKT development. The previous OSR was completed in May 2000.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF job inventory (JI) occupational survey study number (OSSN) 2541, dated February 2003. During the development of the comprehensive task list, 15 subject-matter experts from 3 operational bases and 1 training unit were interviewed. The data collected during these interviews represented an extensive AFSC-wide knowledge and experience, spanning years of SME assignments encompassing a total of 13 bases. Of the 13 different bases, 3 were overseas, providing a valuable perspective to the validation. The survey requested such standard background information as: base of assignment; command of assignment; total active federal military service (TAFMS), time in career field (TICF), and time in present job (TIPJ); job title; work or functional area; paygrade; job satisfaction and reenlistment intentions; and equipment and systems used or operated. Additional background items concerned the number of deployments and days TDY, type of medical facility to which assigned, and location from which blood gas tests were being performed. The inventory listed 372 tasks grouped under 10 duty headings and a background section. (The complete survey is available on the CD containing the products from this study.)

BASE	REASON FOR VISIT
Sheppard AFB TX	Technical training school
Travis AFB CA	Phase II training site; CFM
Lackland AFB TX	Phase II training site
Nellis AFB NV	Small clinic; teams work in more than one area; medical facility in joint venture with Department of Veterans Affairs.

AFSC 4H0X1 Survey Administration

From February to June 2003, survey control monitors at the technical training school and operational bases administered the inventory to all eligible DAFSC 4H031, 4H051, 4H071, 4H091, and 4H000 AD personnel. Members ineligible to take the survey included the following: (1) hospitalized members; (2) members in transition for a permanent change of station; (3) members retiring within the time the inventories were administered to the field; and (4) members who had been in their present jobs for less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from data tapes maintained by the Air Force Personnel Center, Randolph AFB TX.

Survey Sample

The data on survey returns were examined to ensure that the final sample reflected an accurate representation across major commands (MAJCOMs), paygrades, and skill levels. Table 1 displays the distribution of the survey sample by MAJCOM, while Table 2 displays the survey distribution by paygrade groups. Table 3 displays the final sample distribution by skill level. Table 4 displays the AD population for those assigned, surveyed, and in the final sample.

TABLE 1

MAJCOM REPRESENTATION OF SAMPLE

COMMAND	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
AETC	35	24
AMC	26	37
AFMC	17	15
ACC	9	13
USAFE	5	5
USAFA	3	4
PACAF	3	4
OTHER	2	0

TOTAL ASSIGNED*	231
TOTAL ELIGIBLE**	208
TOTAL SURVEYED	198
TOTAL IN SURVEY SAMPLE	109
PERCENT OF ASSIGNED IN SAMPLE	47%
PERCENT OF ELIGIBLE IN SAMPLE	52%
PERCENT OF SURVEYED IN SAMPLE	55%

* Assigned strength as of Oct 02

** Ineligibility defined as: hospitalized members; members in transition for a permanent change of station; members retiring within the time the inventories were administered to the field; and members who had been in their present jobs for less than 6 weeks.

Note: Columns may not add up to 100% due to rounding

TABLE 2

PAYGRADE DISTRIBUTION OF SAMPLE

PAYGRADE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
E-1 - E-2	4	1
E-3	11	9
E-4	11	13
E-5	34	39
E-6	21	17
E-7	15	17
E-8	2	2
E-9	2	3

*As of Oct 02
Note: Columns may not add up to 100% due to rounding

TABLE 3

SKILL-LEVEL DISTRIBUTION OF SAMPLE

SKILL LEVEL	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
4H031	21	14
4H051	50	54
4H071	26	28
4H091	2	2
4H000	1	2

* As of Oct 02

TABLE 4

COMPONENT CHARACTERISTICS

	AD
ASSIGNED*	231
SURVEYED	208
SAMPLE	109
% OF SURVEYED	53%

* As of Oct 02

The command, paygrade, and skill-level distributions of the survey sample are close to the percent assigned, indicating that the sample is a good representation of the career ladder population.

AFSC 4H0X1 SPECIALTY JOBS

The first step in the analysis process is to identify the career ladder structure in terms of the jobs performed by the respondents. CODAP creates an individual job description for each respondent based on the tasks performed and relative amount of time spent on these tasks. The CODAP automated job clustering program then compares all the individual job descriptions, locates the two descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group or forms new groups based on the similarity of tasks and time spent ratings. Human analysis of the final output, aided by additional measures of similarities and differences between groups, determines the final job structure of the career field as described below.

The basic group used in the hierarchical clustering process is the ***Job***. When two or more jobs have a substantial degree of similarity in tasks performed and time spent on tasks, they are grouped together and identified as a ***Cluster***. Jobs not falling within any cluster are identified as ***Independent Jobs (IJs)***. The structure of the career ladder is then defined in terms of clusters, jobs, and independent jobs. The job structure resulting from this grouping process (the various jobs within the AFSC) can be used to evaluate the changes that have occurred in the AFSC since the previous OSR. It can also be used to guide future changes in the AFSC. The above terminology will be used in the discussion of the AFSC 4H0X1 career ladder.

Overview of Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, one cluster and one independent job were identified within the Cardiopulmonary Laboratory career ladder. Figure 1 displays this job structure. Table 5 displays the relative percent time spent on duty areas by the specialty cluster and jobs. A written outline of the job structure follows. The stage (STG) number shown beside each title refers to computer-generated tracking information. The letter "N" represents the number of members in each group. Tables A1-A2 (in the Appendix) provide detailed descriptions of the cluster and IJ listed below. In addition, the tables display tasks performed by members of jobs identified within the cluster. Demographic information is displayed in Table 6.

I. CARDIOPULMONARY CLUSTER (STG 4, N=95)
   - A. Respiratory Therapy Job (STG 13)
   - B. Pulmonary Laboratory Job (STG 14)
   - C. NCOIC Job (STG 17)
   - D. Non-Invasive Cardiology Job (STG 9)

II. SUPERVISION AND TRAINING IJ (STG 7, N=12)

The military members forming this IJ and cluster account for 98% of the survey sample. The remaining 2% were performing tasks or series of tasks that did not group with any of the defined jobs. Job titles given by respondents representative of these personnel include Echo Technician and Nonresident Technical Writer.

AFSC 4H0X1, CARDIOPULMONARY LABORATORY SPECIALTY JOBS
(N=109)

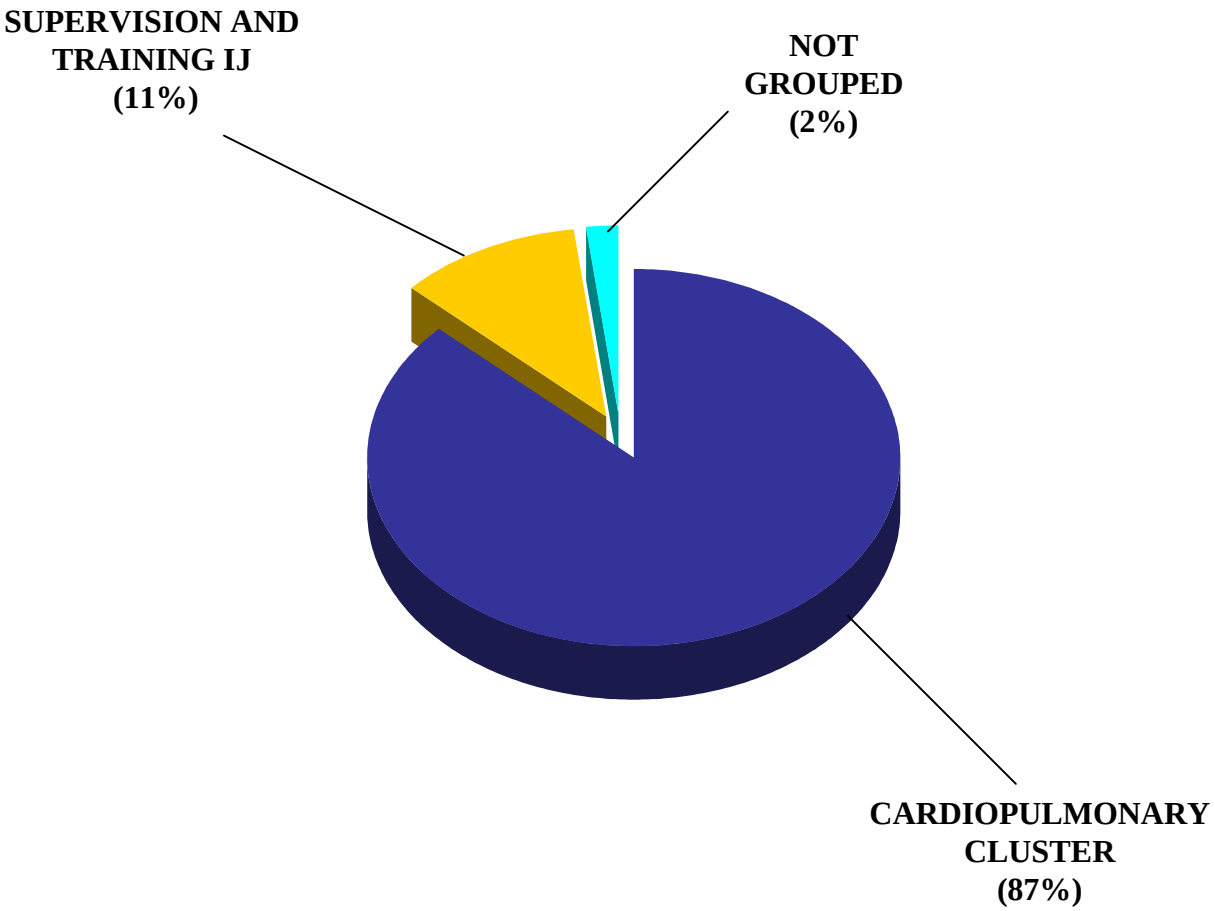

FIGURE 1

JOBS WITHIN THE CARDIOPULMONARY CLUSTER
(N=95)

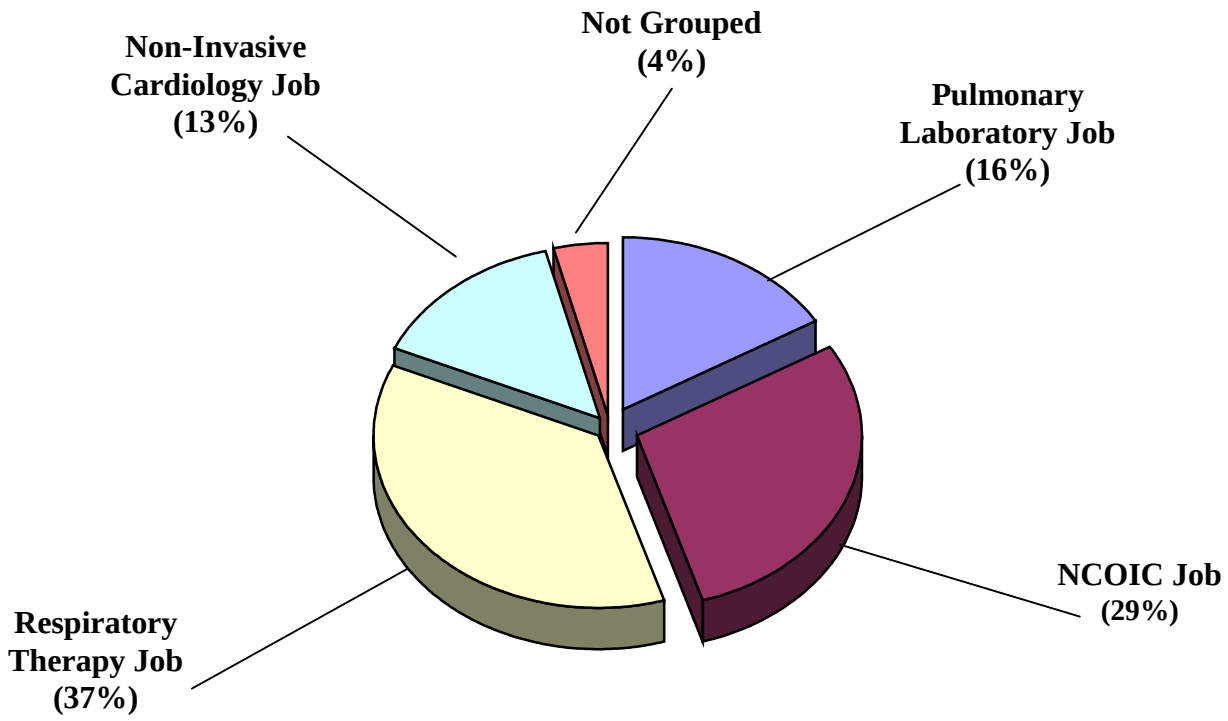

FIGURE 1A

TABLE 5

RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY CLUSTER AND JOB

DUTIES	**CARDIO - PULMONARY CLUSTER (STG 4)**	**CARDIOPULMONARY CLUSTER** Respiratory Therapy Job (STG 13)	Pulmonary Laboratory Job (STG 14)	NCOIC Job (STG 17)
A PERFORMING COMMON RESPIRATORY THERAPY, PULMONARY, CARDIOVASCULAR, OR POLYSOMNOGRAM ACTIVITIES	**31**	36	41	19
B PERFORMING INVASIVE CARDIOVASCULAR ACTIVITIES	**3**	*	*	2
C PERFORMING NON-INVASIVE CARDIOVASCULAR ACTIVITIES	**14**	*	13	15
D PERFORMING PULMONARY LABORATORY ACTIVITIES	**7**	4	21	6
E PERFORMING RESPIRATORY THERAPY ACTIVITIES	**22**	47	12	8
F PERFORMING POLYSOMNOGRAM ACTIVITIES	*****	*	*	*
G PERFORMING ADMINISTRATIVE OR SUPPLY ACTIVITIES	**6**	3	7	10
H PERFORMING MEDICAL READINESS ACTIVITIES	**3**	3	1	6
I PERFORMING TRAINING ACTIVITIES	**4**	3	2	7
J PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	**10**	4	4	25

* Indicates less than 1%
Note: Columns may not add up to 100% due to rounding

TABLE 5 (CONT.)

RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY CLUSTER AND JOB

DUTIES		**CARDIO-PULMONARY CLUSTER** Non-Invasive Cardiology Job (STG 9)	**SUPERVISION & TRAINING IJ (STG 7)**
A	PERFORMING COMMON RESPIRATORY THERAPY, PULMONARY, CARDIOVASCULAR, OR POLYSOMNOGRAM ACTIVITIES	30	**3**
B	PERFORMING INVASIVE CARDIOVASCULAR ACTIVITIES	2	**2**
C	PERFORMING NON-INVASIVE CARDIOVASCULAR ACTIVITIES	52	**3**
D	PERFORMING PULMONARY LABORATORY ACTIVITIES	3	*****
E	PERFORMING RESPIRATORY THERAPY ACTIVITIES	*	**1**
F	PERFORMING POLYSOMNOGRAM ACTIVITIES	0	*****
G	PERFORMING ADMINISTRATIVE OR SUPPLY ACTIVITIES	5	**5**
H	PERFORMING MEDICAL READINESS ACTIVITIES	*	**4**
I	PERFORMING TRAINING ACTIVITIES	3	**26**
J	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	4	**56**

* Indicates less than 1%
Note: Columns may not add up to 100% due to rounding

TABLE 6

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	CARDIO-PULMONARY CLUSTER (STG 4)	**CARDIOPULMONARY CLUSTER**		
		Respiratory Therapy Job (STG 13)	Pulmonary Laboratory Job (STG 14)	NCOIC Job (STG 17)
NUMBER IN CLUSTER AND JOBS	**95**			
PERCENT OF SAMPLE	**87%**			
PERCENT ASSIGNED OVERSEAS	**11%**			
DAFSC DISTRIBUTION:				
4H031	**16%**	26%	20%	0%
4H051	**60%**	60%	67%	54%
4H071	**23%**	14%	13%	43%
4H091	**1%**	0%	0%	4%
4H000	**0%**	0%	0%	0%
GRADE				
E-2 to E-3	**12%**	20%	13%	0%
E-4	**15%**	20%	13%	0%
E-5	**41%**	43%	60%	36%
E-6	**19%**	14%	13%	25%
E-7	**12%**	3%	0%	32%
E-8	**1%**	0%	0%	4%
E-9	**1%**	0%	0%	4%
AVG MONTHS TAFMS (AD)	**124 months**	101 months	103 months	179 months
PERCENT IN FIRST ENLISTMENT (AD)	**16%**	26%	20%	0%
PERCENT SUPERVISING	**56%**	51%	40%	82%
AVERAGE NUMBER OF TASKS PERFORMED	**112**	116	93	163
PREDOMINANT AD MAJCOM	**AMC**	ACC & AETC	AMC	ACC & AMC

Note: Columns may not add up to 100% due to rounding

TABLE 6 (CONT.)

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	CARDIO-PULMONARY CLUSTER	
	Non-Invasive Cardiology Job (STG 9)	**SUPERVISION & TRAINING IJ (STG 7)**
NUMBER IN CLUSTER AND JOBS		**12**
PERCENT OF SAMPLE		**11%**
PERCENT ASSIGNED OVERSEAS		**17%**
DAFSC DISTRIBUTION:		
4H031	15%	**0%**
4H051	77%	**8%**
4H071	8%	**67%**
4H091	0%	**8%**
4H000	0%	**17%**
GRADE		
E-2 to E-3	8%	**0%**
E-4	38%	**0%**
E-5	31%	**17%**
E-6	15%	**8%**
E-7	8%	**50%**
E-8	0%	**8%**
E-9	0%	**17%**
AVG MONTHS TAFMS (AD)	90 months	**211 months**
PERCENT IN FIRST ENLISTMENT (AD)	23%	**0%**
PERCENT SUPERVISING	38%	**100%**
AVERAGE NUMBER OF TASKS PERFORMED	32	**57**
PREDOMINANT MAJCOM	AMC	**AETC & AMC**

Note: Columns may not add up to 100% due to rounding

Comparison of Current Specialty Jobs to Previous Survey

For the most part, specialty jobs found in the present analysis are comparable to specialty jobs from the previous study. However, some differences exist. Table A3 displays the cluster and jobs identified in this study compared to the previous study conducted in 2000.

- The previous study had five independent jobs: Respiratory Therapy IJ, Pulmonary Laboratory IJ, Manager/Supervisor IJ, Non-Invasive Cardiology IJ, and Invasive Cardiology IJ. For the current analysis, the Cardiopulmonary Cluster contains four jobs (Respiratory Therapy Job; Pulmonary Laboratory Job; NCOIC Job; and Non-Invasive Cardiology Job) and one IJ (Supervision and Training IJ). Individuals within the cluster share the majority of common tasks in addition to their individual technical duty areas. The members performing mainly technical tasks are mainly first-term airmen, while supervisory tasks are accomplished by second-term airmen and career airmen.

- Within the Cardiopulmonary Laboratory Cluster, 38% of the members are assigned to the Respiratory Therapy Job, the largest percentage with respect to the cluster. In comparison to the previous survey, the Respiratory Therapy IJ also had the highest number of personnel (38%) working in this specific area.

- The Invasive Cardiology IJ in the previous survey was not found in this study. Since 2000, the Invasive Cardiology tasks have been contracted out and are no longer part of the Cardiopulmonary Laboratory career ladder. Any tasks still performed within the career ladder previously associated with this job are embedded in and not distinguishable from the tasks being performed within the Non-Invasive Cardiology Job.

- Overall, the specialty jobs found in the current survey are quite comparable to the previous survey.

SKILL AND EXPERIENCE ANALYSIS

An analysis of DAFSC groups in conjunction with the analysis of the career ladder structure is an important part of each OSR. This information may be used to evaluate how well career ladder documents, such as AFMAN 36-2108, *Enlisted Classification*, reflect what career ladder personnel are actually doing in the field.

Jobs

Table A4 – Distribution of skill-level members across career ladder cluster and jobs:

- All 3-skill-level members are included in Cardiopulmonary Cluster (100%). Within the cluster, the highest concentration of 3-skill-level members are in the Respiratory Therapy Job (26%). No 3-skill-level members are included in the NCOIC Job and Supervisory and Training IJ (see Table 6).

- Five-skill-level members are spread out within the Cardiopulmonary Cluster jobs: Respiratory Therapy Job (60%); Pulmonary Laboratory Job (67%); NCOIC Job (54%); and Non-Invasive Cardiology Job (77%) (see Table 6). Only 8% of 5-skill-level members work within the Supervision and Training IJ. The 5-skill-level members comprise the highest percentage of members performing work as described in the Non-Invasive Cardiology Job.

- The 7-skill-level members are focused on supervisory duty areas. Their top functional areas include management and supervisory activities as described in the NCOIC Job (43%) within the Cardiopulmonary Cluster and the Supervision and Training IJ (67%). Fourteen percent of the Respiratory Therapy Job is comprised of 7-skill levels (see Table 6).

- Chief enlisted managers and 9-skill-level members were not reported due to fewer than five members responding.

Duties

Table A5 – Time spent on duties by members of skill-level groups:

- No duty area within the JI is evenly represented by all skill-level groups; however, Duty D (Performing Pulmonary Laboratory Activities) comes the closest. At least 6% and no more than 7% of the time spent by all skill-level members is on pulmonary laboratory activities. All other duty areas have much wider ranges of percent time spent.

- Three-skill-level members spend most of their job time in Duty A (Performing Common Respiratory Therapy, Pulmonary, Cardiovascular, or Polysomnogram Activities) (40%) and Duty E (Performing Respiratory Therapy Activities) (34%).

- Five-skill-level members spend the largest percentage of time in Duty A (Performing Common Respiratory Therapy, Pulmonary, Cardiovascular, or Polysomnogram Activities) (31%). An additional 37% of their job time is spent in Duty E (Performing Respiratory Therapy Activities) and Duty C (Performing Non-Invasive Cardiovascular Activities) (20% and 17%, respectively.)

- Seven-skill-level members are more spread out, spending no more than 28% of their job time in any particular duty area. Their top two functional areas include Duty J (Performing Management and Supervisory Activities) at 28% of their job time and Duty A (Performing Common Respiratory Therapy, Pulmonary, Cardiovascular, or Polysomnogram Activities) at 17% of their job time.

Tasks

Table A6 – Tasks performed by DAFSC 4H031 members:

- Tasks being performed by the highest percentages of 3-skill-level members include performing common respiratory therapy, pulmonary, cardiovascular, or polysomnogram activities, and respiratory therapy activities.

Table A7 – Tasks performed by DAFSC 4H051 members:

- Tasks being performed by the highest percentages of 5-skill-level members are somewhat similar to the tasks performed by the 3-skill-level members; however, they include not only common respiratory therapy, pulmonary, cardiovascular, or polysomnogram activities, and non-invasive cardiovascular activities but also take on other activities, such as specific respiratory therapy activities and management and supervisory activities. On average, 5-skill-level members perform 35 more tasks than the 3-skill-level members because of their supervisory role. This increase in tasks can be attributed to the fact that only some 5-skill levels are performing supervisory tasks, whereas 3-skill levels are performing none.

Table A8 – Tasks performed by DAFSC 4H071 members:

- On average, 7-skill-level members perform 115 tasks with a stronger emphasis on supervisory and managerial activities. However, 7-skill-level members still perform technical tasks. Most tasks performed by members in this group center on Duties I (Performing Training Activities) (16%) and Duty J (Performing Management and Supervisory Activities) (28%).

TRAINING ANALYSIS

Occupational survey data are a source of information that can assist in the development or evaluation of training programs for both entry-level and advanced members. In particular, the factors used to evaluate entry-level member training include the jobs that are being performed by first-enlistment personnel (1-48 months' TAFMS), the overall distribution of first-enlistment personnel across career ladder jobs, the percent of first-enlistment members who perform specific tasks, and ratings of relative training emphasis (TE) and task difficulty (TD). (TE and TD ratings are discussed in the Task Factor Administration section of this OSR.)

First-Enlistment Personnel (1–48 months' TAFMS)

(N=16)

Jobs

Figure 2 – Distribution of first-enlistment personnel across specialty cluster and jobs:

- Eighty-seven percent of all first-enlistment personnel are included in the Cardiopulmonary Cluster. First-enlistment personnel account for 11% of the Supervision and Training IJ, and only 2% of members are not grouped.

Duties

Table A9 – Relative time spent on duties by first-enlistment personnel.

- First-enlistment are performing duties very similar to DAFSC 4H031 members with the highest concentration of their job time (73%) in Duty A (Common Respiratory Therapy, Pulmonary, Cardiovascular, or Polysomnogram Activities) (42%) and Duty E (Performing Respiratory Therapy Activities) (31%). Twenty-two percent of these first-enlistment members' job time is distributed across two duty areas: Duty C (Performing Non-Invasive Cardiovascular Activities) and Duty B (Performing Pulmonary Laboratory Activities) (15% and 7%, respectively).

Tasks

Table A10 – Representative tasks performed by first-enlistment personnel.

- Top tasks performed by first-enlistment members include: "administer medications," "perform arterial punctures," and "collect blood gas samples."

Equipment

Table A11 – Equipment or systems used or operated by first-enlistment personnel.

- The three types of equipment used or operated by over 80% of these first-enlistment members include: flow meters (81%); metered-dose inhalers (MDIs) (81%); and stethoscopes (81%). Other equipment includes small volume or handheld nebulizers (75%), pulse oximeters (75%), and suction machines (75%). The remaining types of equipment are used or operated by less than 65% of first-enlistment members.

AFSC 4H0X1 FIRST-ENLISTMENT PERSONNEL ACROSS SPECIALTY JOBS WITHIN THE CARDIOPULMONARY CAREER LADDER (N=16)

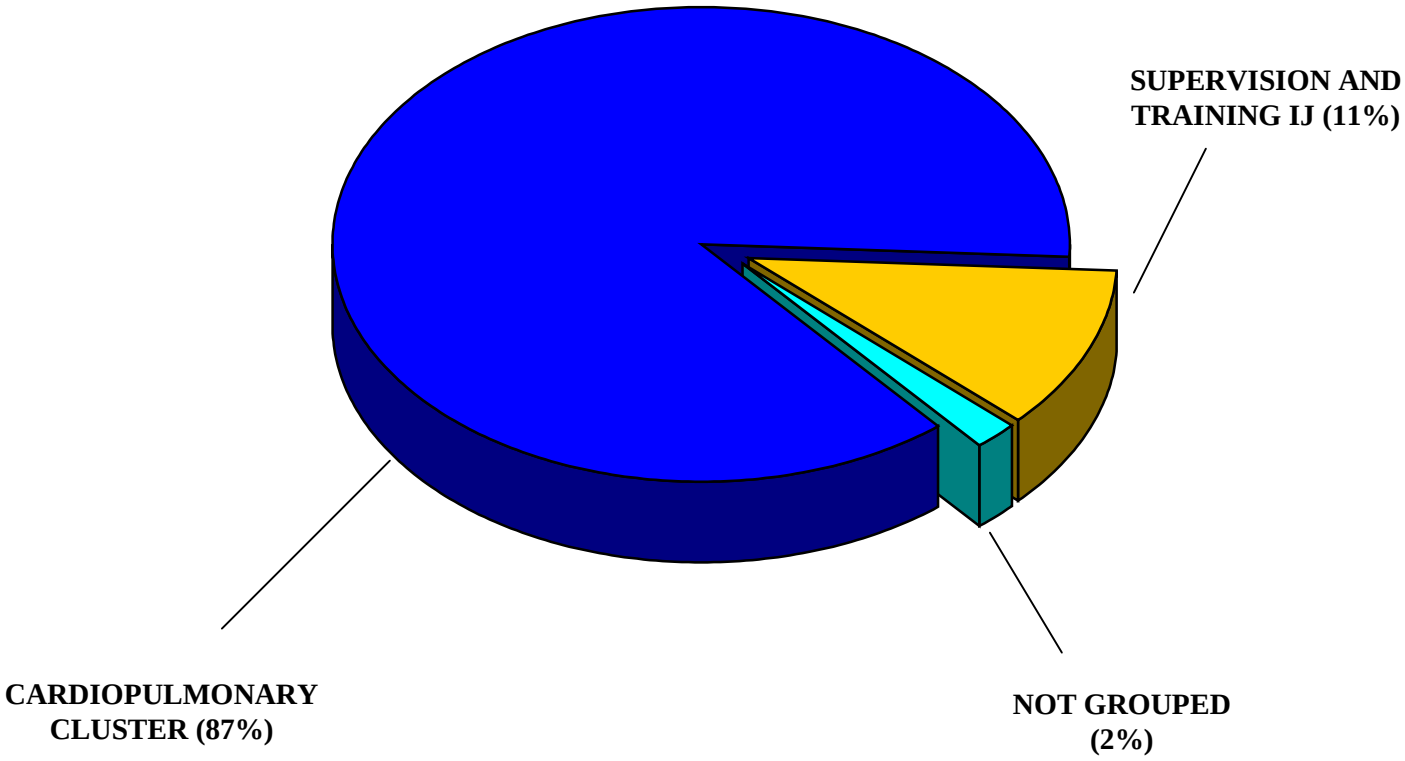

FIGURE 2

Task Factor Surveys

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information, along with data from the specialty training standard (STS), is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected AFSC 4H0X1 members (generally E-6 or E-7 craftsmen) completed either a training emphasis (TE) or task difficulty (TD) survey. The STS was reviewed by matching survey tasks to STS elements, then examining task performance, TE data, and TD data for the matched tasks.

Task Factor Administration

TE and TD data can help training development personnel decide which tasks to emphasize for entry-level, structured training (resident technical schools, field training detachments, mobile training teams, formal OJT, or any other organized training method). For example, tasks receiving high TE and TD ratings generally warrant resident training if they are also performed by a moderate-to-high percentage of first-enlistment members. Tasks receiving high TE and/or TD ratings but being performed by relatively low percentages of first-enlistment members may be more appropriately planned for structured OJT programs within the career ladder. Low TE and/or TD ratings may highlight tasks best omitted from training for new personnel. These task factors are, of course, not the only ones to weigh in making training decisions; the percentages of personnel performing the tasks, command concerns, the criticality of the tasks, and other important factors must also be carefully considered.

Training Emphasis (TE) — degree of emphasis that should be placed on each task for structured training of entry-level members:

- Forty-one AFSC 4H0X1 senior noncommissioned officers (NCOs) rated tasks in the inventory on a scale from 0 (no training required) to 9 (extremely high training emphasis)
- Average TE rating was 3.18 with a standard deviation of 1.92
- If a task has a TE rating at least one standard deviation above the mean, that is, of at least 5.10, it is probably important to provide new personnel with formal training on that task

Table A12 – Tasks with highest TE ratings:

- Most tasks with high TE ratings are from Duty A (Performing Common Respiratory Therapy, Pulmonary, Cardiovascular, or Polysomnogram Activities) and Duty E (Performing Respiratory Therapy Activities).

Task Difficulty (TD) — amount of time needed to learn to perform that task satisfactorily:

- Thirty-nine AFSC 4H0X1 senior NCOs rated the difficulty of tasks in the inventory using a scale from 1 (extremely low difficulty) to 9 (extremely high difficulty)

- TD ratings are normally adjusted so that tasks of average difficulty have a value of 5.00 and a standard deviation of 1.00

- Any task with a difficulty of 6.00 or greater is therefore considered difficult to learn

Table A13 – Tasks with highest TD ratings:

- This table lists percent members performing these tasks by groups of 1-48 months' TAFMS, as well as members of the 3-, 5-, and 7-skill-level groups

- Tasks within Duty B (Performing Invasive Cardiovascular Activities) and Duty E (Performing Respiratory Therapy Activities) received the highest TD ratings. These tasks included maintenance on extracorporeal membrane oxygenation (ECMO) equipment, assisting physicians in performing internal cardiac defibrillator insertions, assisting physicians in performing stent insertions, and setting up ECMO equipment.

Automated Training Indicators (ATI)

To assist training development personnel, the AFOMS developed a computer program that incorporates these secondary factors and the percentage of first-enlistment personnel performing each task to produce an automated training indicator (ATI) for each task. ATIs correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 2, AETCI 36-2601. ATIs allow training developers to quickly focus attention on those basic tasks, which are most likely to qualify for resident training.

Various lists of tasks, accompanied by TE and TD ratings, and where appropriate ATI information, are contained in the Training Extract package and should be reviewed in detail by technical school personnel. (For a more detailed explanation of TE and TD ratings, see Task Factor Administration above).

Specialty Training Standard (STS) Analysis

Technical school personnel from the 383rd Training Squadron (383 TRS), Sheppard AFB TX, matched JI tasks to STS items. Per AETCI 36-2601, dated 14 July 1999, STS elements that are performed by at least 20% of members in appropriate skill-level groups [particularly first-enlistment (1-48 months' TAFMS) members or 3-skill-level members] should be included in the STS. Of course, these are not the only criteria for inclusion in the STS, and other rational considerations may argue against inclusion. Likewise, proficiency-coded elements matched to tasks with less than 20% performing in first-enlistment or 3-skill-level groups should be closely

reviewed by SMEs for possible deletion from the STS, unless other considerations (such as mission criticality or criticality to a particular MAJCOM) argue for inclusion of these "unsupported items." As stated above, tasks not referenced to the STS, with at least 20% of any selected criterion group performing, should be reviewed by training personnel for possible addition to the STS. Finally, three tasks with 20% or more members performing were matched to STS elements without proficiency codes. These STS elements should be reviewed for possible proficiency code revision.

Table A14 – STS elements with proficiency codes matched to tasks being performed by less than 20% of members:

- 14 STS elements with proficiency codes were matched to tasks being performed by less than 20% of members.

- The STS element "Operate D.C. defibrillators" (7b(5)) has the proficiency code "2b". Two tasks performed by less than 20% of AFSC 4H0X1 members were matched to the STS element. The first task matched to this objective, "perform user maintenance on defibrillators" (A0049), is only being performed by 13% of first-enlistment personnel and 7% of 3-skill-level members. The second task matched to this objective, "perform cardiac defibrillation" (B0080), is only being performed by 6% of first-enlistment personnel and 7% of 3-skill-level members.

- The STS element "Perform user maintenance on fiberoptic bronchoscope" (9i(5)) has a proficiency code of "2b". Only 6% of first-enlistment personnel and 0% of 3-skill-level members are performing a task matched to this objective ("perform user maintenance on fiber-optic bronchoscopes") (D0152). The second task matched to this objective is "perform user maintenance on polysomnograph equipment" (F0230). However, no first-enlistment personnel or 3-skill-level members are performing this task.

- Both STS elements as well as other STS elements with a proficiency code and less than 20% members performing should be considered for possible proficiency code revision.

Table A15 – Tasks with 20% or more members performing matched to STS elements without proficiency codes:

- Three areas in the STS with dashed proficiency codes have tasks matched that are being performed by over 20% of members.

- The most notable example is learning objective "Transport mechanically ventilated patients (internal or external)" (10(t)5). The task matched, "transport or monitor patients within facility" (A0060), is being performed by 63% of first-enlistment personnel and 60% of 3-skill-level members. The task matched, "transport and monitor mechanically ventilated patients to another facility" (E0222), is being performed by 25% of first-enlistment personnel and 27% of 3-skill-level members. Lastly, the task "transport and monitor mechanically ventilated patients within facility" (E0223) is being performed by

63% of first-enlistment personnel and 67% of 3-skill-level members. Thus, the STS element associated with these tasks should be considered for proficiency coding in the STS.

- No trends exist in the remaining two areas without proficiency codes and performed by more than 20% or more members.

Table A16 – Tasks not referenced to STS elements with 20% or more members performing:

- Six tasks were not referenced to an STS element with 20% or more members responding. Two tasks (A0004 and E0180) with high ATI ratings (indicating high PMP, TE, and TD values) are strong candidates for the STS and should be reviewed for inclusion in the STS. The remaining four tasks should also be reviewed for possible inclusion in the STS.

- No trends exist in the tasks not referenced.

ANALYSIS OF MAJCOMS

Task and background data for personnel of the seven AD MAJCOMs with the largest AFSC 4H0X1 populations were compared to determine whether job content varied as a function of command assignment and/or component.

For the most part, the work performed across all seven AD commands was similar, with many tasks performed in common. The largest percentage of relative job time across all commands is committed to technical tasks in Duty A (Common Respiratory Therapy, Pulmonary, Cardiovascular, or Polysomnogram Activities) and Duty J (Performing Management and Supervisory Activities) (see Table A17). PACAF and USAFA are spending slightly more of their job time in Duty B (Performing Invasive Cardiovascular Activities) than other MAJCOMs. USAFA members are more likely to perform tasks and responsibilities associated with tasks in Duty F (Performing Polysomnogram Activities). The most notable comment for the work performed by specific MAJCOMs is that there is no substantial difference in the duty areas based on the command to which a member is assigned. The time spent on duties appears to be relatively consistent across MAJCOMs, within the Cardiopulmonary Laboratory community, and in the Air Force.

JOB SATISFACTION ANALYSIS

An examination of job satisfaction indicators can give career ladder managers a better understanding of factors that may affect the job performance of career ladder airmen. The survey included attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions.

Table A18 – displays job satisfaction data by job groups identified in the **AFSC 4H0X1 SPECIALTY JOBS** section of this report:

- AFSC 4H0X1 members report positive job satisfaction across all five job satisfaction indicators. Within the Cardiopulmonary Laboratory Cluster, all four jobs within the cluster indicate their jobs are interesting with members within the Non-Invasive Cardiology Job reporting the lowest expressed job interest (62%).

- In general, the Pulmonary Laboratory Job and the Non-Invasive Cardiology Job within the Cardiopulmonary Laboratory Cluster display slightly less positive job satisfaction across all five indicators than do the other two jobs in the cluster.

Table A19 compares job satisfaction data for the current AFSC 4H0X1 OSR data and the 2000 AFSC 4H0X1 survey. The results of the comparison are summarized below:

- Overall, job satisfaction ratings for the AFSC 4H0X1 members in the current study are relatively similar compared to the AFSC 4H0X1 members in the previous study

- Although data for the 2000 survey for "perceived use of talents" and "perceived use of training" could not be broken out from "excellent to perfect" and "fairly well to very well", the percentages of positive responses to these job satisfaction factors are still high across both the current and previous TAFMS groups.

- For the 49 –96 months' TAFMS and the 97+ months' TAFMS groups, members in the current study indicate higher "perceived use of talents," "perceived use of training," and "sense of accomplishment" than the previous study.

RETENTION DIMENSIONS

JIs also routinely collect information about factors that affect reenlistment and separation decisions. That is, respondents who say that they are likely to reenlist at the end of their present term (and those not eligible for retirement) are asked to indicate whether any of 31 different factors will have an effect on their intended decision and, if so, the degree to which each factor may influence their decision to reenlist. Respondents who indicate that they are likely to separate at the end of their present term (and those not eligible for retirement) are asked to indicate

whether any of 31 different factors will have an effect on their intended decision and, if so, the degree to which each factor may influence their decision to separate. The degree is indicated on a 3-point scale ranging from "slight influence" to "strong influence."

Reenlistment

Table A20 – Lists the 31 factors in the order they appeared in the survey. The percent selecting each factor and the average rating for each factor by TAFMS group based on how much each factor may influence their decision to reenlist are also shown:

- Top five reasons members may choose to reenlist based on the highest percentages selecting each factor are listed below Table A20.
  - Top reasons for reenlistment were similar for all three TAFMS groups. "Job security" appeared for each of the three TAFMS groups as one of the top reasons for reenlisting.
  - First-enlistment and second-enlistment personnel reported identical reasons for reenlisting with "military-related education and training opportunities" as the top reason for reenlisting.
  - Second-enlistment and career airmen personnel reported comparable reasons for reenlisting with "medical/dental care for family members" and "retirement benefits" as reasons for reenlisting.
  - Career airmen reported "retirement benefits" as the top reason for reenlisting.

Separation

Table A21 – Displays the percentage of the members for each TAFMS group indicating that their plans to separate may be influenced by each factor as well as the average ratings by TAFMS group for the 31 factors based on the influence each factor may have on the respondents' decisions to separate:

- Top five reasons members in each TAFMS group may choose to separate based on the highest percentages selecting each factor are listed below Table A21
  - Three common reasons for all TAFMS groups intending to separate include: "civilian job opportunities," "unit manning," and "recognition of efforts"
  - First-enlistment personnel also reported "military lifestyle" and "pay and allowances" as top reasons for separation

WRITE-IN COMMENTS

When there are serious problems in a career ladder, survey respondents are usually quite free with write-in comments to express concerns about perceived problems in the field. Approximately 304 comments were received from survey respondents. All respondents of the survey sample used the write-in feature to convey some type of information. Many respondents used the write-in comments to provide information about themselves and their jobs.

Of the write-in comments: 22% provided information about their job title or provided explanations of work performed and 23% provided miscellaneous comments (ranging from dissatisfaction with supervisory leadership, lack of experience-based training, and work not being recognized). The remaining 55% of the comments provided clarification on functional area, additional tasks performed, and various topics.

Two trends became evident when analyzing the write-in comments: long work hours and additional duties that go unrecognized. Eighteen members conveyed negative feelings regarding leadership and lack of professional supervision within the career ladder. Also, many spoke of unit manning as an issue that should be addressed. They reported frequently working long shifts and going TDY because there are not enough people in the career ladder.

These write-in comments may support the reasons for separation in AFSC 4H0X1, as mentioned in the **RETENTION DIMENSIONS** section of this report.

APPENDIX

TABLES A1 – A21 ARE REFERENCED WITHIN THE BODY OF THE OSR

TABLE A1

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE CARDIOPULMONARY CLUSTER
(N=95)

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED = 112*	PERCENT MEMBERS PERFORMING
A0001	Administer medications	86
A0017	Collect blood gas samples	81
A0023	Inspect cardiopulmonary equipment	80
A0033	Perform arterial punctures	80
A0024	Instruct patients in use of metered dose inhalers (MDIs)	78
A0037	Perform cardiopulmonary resuscitation (CPR)	78
A0058	Take and record vital signs	77
A0019	Connect flow meters	75
A0016	Clean and disinfect nondisposable cardiopulmonary equipment or components	74
A0055	Set up and administer delivery devices for administering oxygen	74
A0060	Transport or monitor patients within facility	72
A0042	Perform peak flows	72
A0053	Set up nebulizers	71
A0059	Transport or change gas cylinders	71
A0028	Interpret arterial blood gas data	68
A0004	Assemble or disassemble cardiopulmonary equipment components	68
A0026	Instruct patients in use of handheld or updraft nebulizers	66
A0030	Obtain patient histories	65
A0051	Prepare cardiopulmonary equipment for sterilization	65
A0044	Perform pulse oximeter tests	64
A0034	Perform blood gas analyses	64
A0029	Monitor electrocardiographic (ECG) recordings	63
E0161	Administer and monitor bronchodilator therapies	63
A0003	Analyze pulse oximeter test results	63
A0025	Instruct patients in specialized breathing	62
A0040	Perform code cart checks	59
I0300	Conduct on-the-job training (OJT)	59
A0012	Assist physicians in performing treadmill tests	58
A0052	Review medical records of patients	58
E0158	Adjust ventilator settings and alarms	58
C0097	Assess and report ECG test results to physician	57
E0192	Perform routine ventilator checks	57
E0190	Perform pre- or post-treatment evaluations of respiratory therapy patients	57

TABLE A1a

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE RESPIRATORY THERAPY JOB
(N=35)

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED = 116*	PERCENT MEMBERS PERFORMING
A0001	Administer medications	100
E0192	Perform routine ventilator checks	100
A0053	Set up nebulizers	100
A0017	Collect blood gas samples	100
A0033	Perform arterial punctures	100
E0158	Adjust ventilator settings and alarms	100
A0028	Interpret arterial blood gas data	100
A0034	Perform blood gas analyses	100
E0171	Assist physicians in weaning patients from ventilators	100
E0170	Assist physicians in performing extubation procedures	100
E0201	Perform weaning parameters	100
E0176	Instruct patients on BiPAP or continuous positive airway pressure (CPAP)	100
E0161	Administer and monitor bronchodilator therapies	97
A0055	Set up and administer delivery devices for administering oxygen	97
E0202	Record patient respiratory therapy results	97
E0168	Assist patients with volume cycled ventilators	97
E0203	Record progress of respiratory therapy treatments	97
E0190	Perform pre- or post- treatment evaluations of respiratory therapy patients	97
A0024	Instruct patients in use of metered dose inhalers (MDIs)	97
A0019	Connect flow meters	97
E0223	Transport and monitor mechanically ventilated patients within facility	97
E0211	Set up humidifiers	97
E0175	Instruct patients in use of incentive spirometers	97
A0031	Obtain sputum samples	97
A0026	Instruct patients in use of handheld or updraft nebulizers	94
E0180	Maintain open airways	94
E0207	Set up CPAP devices	94
E0162	Administer and monitor continuous nebulizer treatments	94
E0187	Perform nasotracheal suctioning procedures	94
A0042	Perform peak flows	94
E0182	Perform artificial airway suctioning procedures	91
E0166	Assist patients with pressure cycled ventilators	91
E0188	Perform post treatment evaluations of respiratory therapy patients	91
E0160	Administer and monitor bi-level positive airway pressure (BiPAP) devices	91

TABLE A1b

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE PULMONARY LABORATORY JOB
(N=15)

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED = 93*	PERCENT MEMBERS PERFORMING
A0043	Perform pulmonary function studies	100
D0137	Calibrate pulmonary function testing equipment	100
D0150	Perform routine spirometry tests	100
D0146	Perform lung diffusion tests	100
A0042	Perform peak flows	100
A0024	Instruct patients in use of metered dose inhalers (MDIs)	93
A0053	Set up nebulizers	93
A0017	Collect blood gas samples	93
A0033	Perform arterial punctures	93
A0059	Transport or change gas cylinders	93
A0001	Administer medications	93
D0139	Perform closing volume loop tests	87
A0044	Perform pulse oximeter tests	87
A0040	Perform code cart checks	87
A0026	Instruct patients in use of handheld or updraft nebulizers	87
A0016	Clean and disinfect nondisposable cardiopulmonary equipment or components	87
A0012	Assist physicians in performing treadmill tests	80
D0149	Perform pre- versus post- bronchodilator tests	80
A0023	Inspect cardiopulmonary equipment	80
A0058	Take and record vital signs	80
D0141	Perform exercise desaturation studies	80
D0142	Perform exercise-induced asthma tests	80
A0025	Instruct patients in specialized breathing	80
A0004	Assemble or disassemble cardiopulmonary equipment components	80
A0051	Prepare cardiopulmonary equipment for sterilization	80
A0003	Analyze pulse oximeter test results	80
C0118	Perform exercise stress tests	73
A0029	Monitor electrocardiographic (ECG) recordings	73
A0045	Perform standard precaution procedures	73
D0138	Perform body plethysmography	73
A0030	Obtain patient histories	73
C0119	Perform Holter monitoring tests	67
C0100	Assess and report Holter monitoring test results to physician	67
A0006	Assess treadmill test results	67

TABLE A1c

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE NCOIC JOB
(N=28)

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED = 106*	PERCENT MEMBERS PERFORMING
G0257	Schedule patients for evaluations, consultations, or procedures	93
G0245	Maintain general correspondence, files, records, or laboratory reports	93
I0312	Maintain training records or files	93
J0328	Counsel subordinates concerning personal matters	93
J0337	Develop or establish work schedules	93
G0250	Maintain stock levels of general supplies or forms	93
J0322	Conduct general meetings, such as staff meetings, conferences, or workshops	93
C0097	Assess and report ECG test results to physician	89
C0119	Perform Holter monitoring tests	89
G0242	Coordinate purchase of special equipment or medical supplies with medical materiel personnel or vendors	89
A0023	Inspect cardiopulmonary equipment	89
J0324	Conduct self-inspections or self-assessments	89
I0300	Conduct on-the-job training (OJT)	89
G0243	Initiate requisitions for equipment or supplies	89
C0125	Perform user maintenance on ECG machines	89
J0353	Evaluate procedures for storage, inventory, or inspection of property items	89
G0254	Prepare requests for issue or turn-in of equipment or supplies	89
J0370	Write recommendations for awards or decorations	89
A0001	Administer medications	89
C0100	Assess and report Holter monitoring test results to physician	86
A0012	Assist physicians in performing treadmill tests	86
C0118	Perform exercise stress tests	86
G0241	Compile and input work load data	86
A0029	Monitor electrocardiographic (ECG) recordings	86
G0253	Perform data entry for data handling computer systems	86
J0327	Conduct supervisory performance feedback sessions	86
J0367	Schedule work assignments or priorities	86
G0244	Initiate statistical reports	86
C0127	Perform user maintenance on stress test systems	86
J0323	Conduct safety inspections of equipment or facilities	86
I0309	Evaluate progress of trainees	86

TABLE A1d

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE NON-INVASIVE CARDIOPULMONARY JOB
(N=13)

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED = 32*	PERCENT MEMBERS PERFORMING
A0012	Assist physicians in performing treadmill tests	100
C0119	Perform Holter monitoring tests	100
C0100	Assess and report Holter monitoring test results to physician	100
C0118	Perform exercise stress tests	92
C0097	Assess and report ECG test results to physician	85
A0006	Assess treadmill test results	77
C0099	Assess and report event monitoring test results to physician	69
C0116	Perform event monitoring tests	69
C0098	Assess and report echocardiogram test results to physician	69
A0016	Clean and disinfect nondisposable cardiopulmonary equipment or components	69
C0114	Perform contrast echocardiography tests	62
A0040	Perform code cart checks	62
C0113	Perform color doppler studies	54
A0015	Clean patient treatment or examination rooms	54
A0029	Monitor electrocardiographic (ECG) recordings	54
C0106	Assist physicians in performing transesophageal echocardiogram studies	54
A0023	Inspect cardiopulmonary equipment	54
A0058	Take and record vital signs	54
C0122	Perform trans-thoracic or M-Mode echocardiograms	46
C0127	Perform user maintenance on stress test systems	46
C0126	Perform user maintenance on echocardiograph systems	46
C0117	Perform exercise echocardiogram tests	46
C0108	Edit archived ECGs	46
C0115	Perform ECG tests, other than signal-average	38
C0120	Perform pharmachologic echocardiography stress tests	38
C0125	Perform user maintenance on ECG machines	31
G0257	Schedule patients for evaluations, consultations, or procedures	31
D0150	Perform routine spirometry tests	23

TABLE A2

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE SUPERVISION AND TRAINING IJ
(N=12)

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED = 57*	PERCENT MEMBERS PERFORMING
J0342	Establish performance standards for subordinates	100
J0351	Evaluate personnel for compliance with performance standards	92
J0340	Establish administrative files, such as correspondence files or classified files	92
J0328	Counsel subordinates concerning personal matters	92
J0370	Write recommendations for awards or decorations	92
J0358	Interpret policies, directives, or procedures for subordinates	83
J0337	Develop or establish work schedules	83
I0302	Counsel trainees on training progress	83
I0309	Evaluate progress of trainees	75
I0308	Evaluate effectiveness of training programs, plans, or procedures	75
J0357	Inspect personnel for compliance with military standards	75
J0322	Conduct general meetings, such as staff meetings, conferences, or workshops	75
J0327	Conduct supervisory performance feedback sessions	75
J0355	Initiate actions required due to substandard performance of personnel	75
J0360	Plan briefings, conferences, or workshops	75
J0352	Evaluate personnel for promotion, demotion, reclassification, or special awards	67
I0305	Develop training materials or aids	67
I0303	Determine training requirements	67
J0319	Assign personnel to work areas or duty positions	67
I0298	Brief personnel concerning training programs or matters	67
I0311	Inspect training materials or aids for operation or suitability	67
J0341	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	67
J0364	Recommend personnel for training	67
J0349	Evaluate job-related suggestions	67
I0313	Personalize lesson plans	58
I0301	Conduct training conferences, briefings, or debriefings	58
J0331	Determine or establish work assignments or priorities	58
J0367	Schedule work assignments or priorities	58
I0299	Conduct formal course classroom training	50
I0312	Maintain training records or files	50

TABLE A3

SPECIALTY JOB COMPARISONS BETWEEN CURRENT AND 2000 SURVEYS

CURRENT SURVEY (N=109)		**2000 SURVEY (N=203)**	
CARDIOPULMONARY CLUSTER	87%		
Respiratory Therapy Job	32%	RESPIRATORY THERAPY IJ	38%
Pulmonary Laboratory Job	14%	PULMONARY LABORATORY IJ	5%
NCOIC Job	26%		
Non-Invasive Cardiology Job	12%	NON-INVASIVE CARDIOLOGY IJ	27%
SUPERVISION AND TRAINING IJ	11%	MANAGER/SUPERVISOR IJ	24%
—	—	INVASIVE CARDIOLOGY IJ	3%

— Indicates job not found in study

TABLE A4

DISTRIBUTION OF AFSC 4H0X1 SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS
(PERCENT IN EACH JOB)

NOT GROUPED	7	4	0
SUPERVISION AND TRAINING IJ	0	2	26
SPECIALTY JOBS	DAFSC 4H031 (N=15)	DAFSC 4H051 (N=59)	DAFSC 4H071 (N=31)
CARDIOPULMONARY LABORATORY CLUSTER	100	97	71
RESPIRATORY THERAPY JOB	60	34	16
PULMONARY LABORATORY JOB	20	17	7
NCOIC JOB	0	25	39
NON-INVASIVE CARDIOLOGY JOB	13	17	3

*Indicates less than 1%
Note: Columns may not add up to 100% due to rounding

TABLE A5

TIME SPENT ON DUTIES BY MEMBERS OF
AFSC 4H0X1 SKILL-LEVEL GROUPS
(PERCENT RESPONDING)

DUTIES		TOTAL 4H031 (N=15)	TOTAL 4H051 (N=59)	TOTAL 4H071 (N=31)
A	PERFORMING COMMON RESPIRATORY THERAPY, PULMONARY, CARDIOVASCULAR, OR POLYSOMNOGRAM ACTIVITIES	40	31	17
B	PERFORMING INVASIVE CARDIOVASCULAR ACTIVITIES	*	2	4
C	PERFORMING NON-INVASIVE CARDIOVASCULAR ACTIVITIES	12	17	7
D	PERFORMING PULMONARY LABORATORY ACTIVITIES	7	7	6
E	PERFORMING RESPIRATORY THERAPY ACTIVITIES	34	20	11
F	PERFORMING POLYSOMNOGRAM ACTIVITIES	*	*	*
G	PERFORMING ADMINISTRATIVE OR SUPPLY ACTIVITIES	4	6	7
H	PERFORMING MEDICAL READINESS ACTIVITIES	*	3	4
I	PERFORMING TRAINING ACTIVITIES	2	3	16
J	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1	9	28

* Indicates less than 1%
Note: Columns may not add up to 100% due to rounding

TABLE A6

REPRESENTATIVE TASKS PERFORMED BY DAFSC 4H031 PERSONNEL

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED = 72*	PERCENT MEMBERS PERFORMING (N=15)
A0001	Administer medications	87
A0033	Perform arterial punctures	87
A0017	Collect blood gas samples	87
A0053	Set up nebulizers	80
E0161	Administer and monitor bronchodilator therapies	80
A0019	Connect flow meters	80
A0042	Perform peak flows	80
A0026	Instruct patients in use of handheld or updraft nebulizers	73
E0192	Perform routine ventilator checks	73
A0024	Instruct patients in use of metered dose inhalers (MDIs)	73
A0055	Set up and administer delivery devices for administering oxygen	73
E0190	Perform pre or post treatment evaluations of respiratory therapy patients	73
A0034	Perform blood gas analyses	73
E0158	Adjust ventilator settings and alarms	73
E0171	Assist physicians in weaning patients from ventilators	73
E0168	Assist patients with volume cycled ventilators	73
A0040	Perform code cart checks	67
A0058	Take and record vital signs	67
E0203	Record progress of respiratory therapy treatments	67
A0044	Perform pulse oximeter tests	67
A0016	Clean and disinfect nondisposable cardiopulmonary equipment or components	67

TABLE A7

REPRESENTATIVE TASKS PERFORMED BY DAFSC 4H051 PERSONNEL

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED = 107*	PERCENT MEMBERS PERFORMING (N=59)
A0001	Administer medications	83
A0023	Inspect cardiopulmonary equipment	81
A0024	Instruct patients in use of metered dose inhalers (MDIs)	80
A0033	Perform arterial punctures	80
A0016	Clean and disinfect nondisposable cardiopulmonary equipment or components	78
A0058	Take and record vital signs	73
A0044	Perform pulse oximeter tests	64
C0097	Assess and report ECG test results to physician	61
A0029	Monitor electrocardiographic (ECG) recordings	61
A0030	Obtain patient histories	59
A0012	Assist physicians in performing treadmill tests	58
A0040	Perform code cart checks	56
C0118	Perform exercise stress tests	54
A0045	Perform standard precaution procedures	54
C0100	Assess and report Holter monitoring test results to physician	51
C0119	Perform Holter monitoring tests	51
G0257	Schedule patients for evaluations, consultations, or procedures	49
D0150	Perform routine spirometry tests	49
A0006	Assess treadmill test results	49
A0015	Clean patient treatment or examination rooms	47
A0043	Perform pulmonary function studies	47

TABLE A8

REPRESENTATIVE TASKS PERFORMED BY DAFSC 4H071 PERSONNEL

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED = 115*	PERCENT MEMBERS PERFORMING (N=31)
J0328	Counsel subordinates concerning personal matters	84
I0309	Evaluate progress of trainees	77
J0342	Establish performance standards for subordinates	77
J0327	Conduct supervisory performance feedback sessions	74
I0312	Maintain training records or files	71
J0337	Develop or establish work schedules	71
J0370	Write recommendations for awards or decorations	71
I0305	Develop training materials or aids	68
J0358	Interpret policies, directives, or procedures for subordinates	68
I0302	Counsel trainees on training progress	65
I0308	Evaluate effectiveness of training programs, plans, or procedures	65
I0303	Determine training requirements	65
J0319	Assign personnel to work areas or duty positions	65
J0357	Inspect personnel for compliance with military standards	65
I0306	Develop training programs, plans, or procedures	61
J0351	Evaluate personnel for compliance with performance standards	61
J0329	Determine or establish logistics requirements, such as personnel, equipment, supplies, or workspace	58
G0245	Maintain general correspondence, files, records, or laboratory reports	58

TABLE A9

PERCENT TIME SPENT ON DUTIES BY
FIRST-ENLISTMENT PERSONNEL (1–48 MONTHS' TAFMS)

DUTIES		1-48 MONTHS' TAFMS (N=16)
A	PERFORMING COMMON RESPIRATORY THERAPY, PULMONARY, CARDIOVASCULAR, OR POLYSOMNOGRAM ACTIVITIES	42
B	PERFORMING INVASIVE CARDIOVASCULAR ACTIVITIES	1
C	PERFORMING NON-INVASIVE CARDIOVASCULAR ACTIVITIES	15
D	PERFORMING PULMONARY LABORATORY ACTIVITIES	7
E	PERFORMING RESPIRATORY THERAPY ACTIVITIES	31
F	PERFORMING POLYSOMNOGRAM ACTIVITIES	*
G	PERFORMING ADMINISTRATIVE OR SUPPLY ACTIVITIES	3
H	PERFORMING MEDICAL READINESS ACTIVITIES	1
I	PERFORMING TRAINING ACTIVITIES	1
J	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	*

*Indicates less than 1%
Note: Column may not add up to 100% due to rounding

TABLE A10

REPRESENTATIVE TASKS PERFORMED BY AFSC 4H0X1
FIRST-ENLISTMENT PERSONNEL (1–48 MONTHS' TAFMS)

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED = 68*	PERCENT MEMBERS PERFORMING (N=16)
A0001	Administer medications	88
A0033	Perform arterial punctures	81
A0017	Collect blood gas samples	81
A0016	Clean and disinfect nondisposable cardiopulmonary equipment or components	75
A0053	Set up nebulizers	75
E0161	Administer and monitor bronchodilator therapies	75
A0044	Perform pulse oximeter tests	75
A0042	Perform peak flows	75
A0058	Take and record vital signs	69
A0026	Instruct patients in use of handheld or updraft nebulizers	69
E0192	Perform routine ventilator checks	69
A0024	Instruct patients in use of metered dose inhalers (MDIs)	69
A0055	Set up and administer delivery devices for administering oxygen	69
E0190	Perform pre or post treatment evaluations of respiratory therapy patients	69
A0034	Perform blood gas analyses	69
A0040	Perform code cart checks	62
E0203	Record progress of respiratory therapy treatments	62
A0030	Obtain patient histories	62
A0012	Assist physicians in performing treadmill tests	56
C0118	Perform exercise stress tests	56
A0029	Monitor electrocardiographic (ECG) recordings	56

TABLE A11

EQUIPMENT OR SYSTEMS USED OR OPERATED BY
FIRST-ENLISTMENT AFSC 4H0X1 PERSONNEL
(PERCENT USING OR OPERATING)

EQUIPMENT OR SYSTEMS	(N=16)
Flow Meters	81
Metered-Dose Inhalers (MDIs)	81
Stethoscopes	81
Nebulizers, Small Volume (SVNs) or Handheld (HHNs)	75
Oximeters, Pulse	75
Suction Machines	75
Cuff Manometers	69
Resuscitation Bags	69
Catheters, Suction	63
Composite Health Care Systems (CHCS)	63
Devices, Oxygen (O2) Humidification (Bubble)	63
Electrocardiographic Machines	63
Incentive Spirometers	63
Intubation Equipment	63
Negative Inspiratory Force (NIF) Meters	63
Ventilators, Volume	63
Bi-Level Positive Airway Pressure (BiPAP) Equipment	56
Continuous Positive Airway Pressure (CPAP) Equipment	56
Devices, Humidification	56
Oxygen Blenders	56
Percussors	56
Defibrillators	50
Holter Monitor Equipment	50
Monitors, Ventilator Mechanics	50
Ventilators, Volume	50
Bronchoscopes, Fiber-Optic	44

TABLE A12

AFSC 4H0X1 TASKS WITH HIGHEST TRAINING EMPHASIS (TE) RATINGS

TASKS		TNG EMP*	TSK DIF**	ATI***	PERCENT MEMBERS PERFORMING 1st ENL	PERCENT MEMBERS PERFORMING 3-LVL
A0001	Administer medications	7.00	3.24	13	88	87
A0017	Collect blood gas samples	7.00	5.34	18	81	87
A0033	Perform arterial punctures	6.95	5.62	18	81	87
E0220	Set up or calibrate transport ventilators	6.84	5.37	12	44	47
A0037	Perform cardiopulmonary resuscitation (CPR)	6.84	4.90	18	50	53
E0180	Maintain open airways	6.74	5.36	18	56	60
A0034	Perform blood gas analyses	6.68	4.99	18	69	73
E0168	Assist patients with volume cycled ventilators	6.68	6.15	18	69	73
E0171	Assist physicians in weaning patients from ventilators	6.68	5.81	18	69	73
E0223	Transport and monitor mechanically ventilated patients within facility	6.68	5.18	18	63	67
E0219	Set up or calibrate mechanical ventilators, other than at altitude	6.68	5.68	18	56	53
E0170	Assist physicians in performing extubation procedures	6.63	5.32	18	69	73
E0167	Assist patients with time cycled ventilators	6.63	6.22	12	38	40
E0187	Perform nasotracheal suctioning procedures	6.58	4.94	18	56	60
E0222	Transport and monitor mechanically ventilated patients to another facility	6.53	5.84	11	25	27
E0192	Perform routine ventilator checks	6.53	4.17	18	69	73
E0182	Perform artificial airway suctioning procedures	6.32	4.80	18	56	60
E0218	Set up or calibrate mechanical ventilators at altitude	6.32	6.75	11	25	20

* Mean TE Rating = 3.18; Standard Deviation = 1.92; High TE = 5.10

** Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

*** ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

TABLE A13

AFSC 4H0X1 TASKS WITH HIGHEST TASK DIFFICULTY (TD) RATINGS

TASKS		TSK DIF*	TNG EMP**	ATI***	PERCENT MEMBERS PERFORMING 1st ENL	3-LVL	5-LVL	7-LVL
E0193	Perform user maintenance on extracorporeal membrane oxygenation (ECMO) equipment	7.52	2.00	2	6	7	10	6
B0069	Assist physicians in performing internal cardiac defibrillator insertions	7.48	0.95	****	0	0	3	6
B0072	Assist physicians in performing stent insertions	7.42	1.37	****	0	0	3	6
C0107	Assist physicians with echo-guided pericardial centesis	7.28	2.74	****	0	7	14	16
B0070	Assist physicians in performing non-echo guided pericardial centesis	7.21	1.26	****	0	0	8	10
E0208	Set up ECMO equipment	7.12	1.58	2	6	7	10	6
B0071	Assist physicians in performing shunt detections	7.03	1.95	2	6	13	7	6
E0186	Perform mechanical ventilations at altitude	7.00	6.16	11	19	20	37	26
B0063	Assist physicians in performing balloon pump insertions	6.96	1.37	****	0	0	7	3
B0065	Assist physicians in performing coronary arteriographs	6.94	1.16	****	0	0	7	10
C0106	Assist physicians in performing transesophageal echocardiogram studies	6.91	4.32	7	6	13	20	19
B0064	Assist physicians in performing cardiac pacemaker insertions	6.88	1.32	****	0	0	7	10
B0066	Assist physicians in performing coronary atherectomy procedures	6.88	0.95	****	0	0	3	0
F0233	Perform and interpret polysomnogram tests	6.84	1.32	****	0	0	2	0

* Mean TE Rating = 3.18; Standard Deviation = 1.92; High TE = 5.10

** Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

*** ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

**** No ATI calculated since first-enlistment percent members performing is 0%

TABLE A14

EXAMPLES OF STS ELEMENTS NOT SUPPORTED BY SURVEY DATA
(LESS THAN 20% MEMBERS PERFORMING)

UNIT	STS ELEMENT	PROF CODE	PERCENT MEMBERS PERFORMING 1ST ENL (N=16)	PERCENT MEMBERS PERFORMING 3-LVL (N=15)	TNG EMP*	TSK DIF**	ATI***
1f(4)(c)	Caustic and corrosive chemicals (1(f)4 Plan safety or security programs)	b					
Task	J0363. Plan safety or security programs		0	0	1.32	5.23	****
7a(11)	Drug or physiologically induced asthma study (7a. Assist physician in performing)	a					
Tasks	D0140. Perform drug-induced asthma tests		13	13	5.37	5.26	11
	D0142. Perform exercise-induced asthma tests		6	7	5.21	5.34	11
7b(5)	Operate D.C. defibrillators (7b. Assist physician in cardiopulmonary emergency procedures)	2b					
Tasks	A0049. Perform user maintenance on defibrillators		13	7	4.53	4.32	7
	B0080. Perform cardiac defibrillation		6	7	2.95	5.54	2
9i(5)	Fiberoptic bronchoscope (9i. Perform user maintenance on)	2b					
Tasks	D0152. Perform user maintenance on fiber-optic bronchoscopes		6	0	4.42	5.56	7
	F0230. Perform user maintenance on polysomnograph equipment		0	0	1.26	5.96	****

* Mean TE Rating = 3.18; Standard Deviation = 1.92; High TE = 5.10

** Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

*** ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

**** No ATI calculated since first-enlistment percent members performing is 0%

TABLE A15

EXAMPLES OF STS ELEMENTS WITHOUT PROFICIENCY CODES MATCHED TO TASKS WITH 20% OR MORE MEMBERS PERFORMING

UNIT	STS ELEMENT	PROF CODE	PERCENT MEMBERS PERFORMING 1ST ENL (N=16)	PERCENT MEMBERS PERFORMING 3-LVL (N=15)	TNG EMP*	TSK DIF**	ATI***
10t(5)	Transport mechanically ventilated patients (internal or external) (10t. Team functions during long/short term ventilation	-					
Tasks	A0060. Transport or monitor patients within facility		63	60	5.26	3.94	13
	E0222. Transport and monitor mechanically ventilated patients to another facility		25	27	6.53	5.84	11
	E0223. Transport and monitor mechanically ventilated patients within facility		63	67	6.68	5.18	18

* Mean TE Rating = 3.18; Standard Deviation = 1.92; High TE = 5.10

** Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

*** ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

TABLE A16

TASKS PERFORMED BY 20% OR MORE MEMBERS
BUT NOT REFERENCED TO ANY STS ELEMENT

TASKS		TNG EMP*	PERCENT MEMBERS PERFORMING 1ST ENL (N=16)	PERCENT MEMBERS PERFORMING 3-LVL (N=15)	TSK DIF**	ATI***
A0004	Assemble or disassemble cardiopulmonary equipment components	5.21	50	53	4.94	18
A0015	Clean patient treatment or examination rooms	2.79	38	33	1.29	4
A0023	Inspect cardiopulmonary equipment	4.63	63	60	3.90	8
A0040	Perform code cart checks	3.63	63	67	2.91	8
E0180	Maintain open airways	6.74	56	60	5.36	18
E0183	Perform bedside spirometry	5.16	31	33	4.54	12

* Mean TE Rating = 3.18; Standard Deviation = 1.92; High TE = 5.10

** Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

*** ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

TABLE A17

PERCENT TIME SPENT ON DUTIES BY AFSC 4H0X1 **MAJCOM** GROUPS

DUTIES	AMC (N=40)	AETC (N=26)	AFMC (N=16)	ACC (N=14)	USAFE (N=5)	PACAF (N=4)	USAFA (N=4)
A PERFORMING COMMON RESPIRATORY THERAPY, PULMONARY, CARDIOVASCULAR, OR POLYSOMNOGRAM ACTIVITIES	28	25	29	26	29	27	20
B PERFORMING INVASIVE CARDIOVASCULAR ACTIVITIES	3	5	2	*	*	16	18
C PERFORMING NON-INVASIVE CARDIOVASCULAR ACTIVITIES	15	10	9	15	10	17	10
D PERFORMING PULMONARY LABORATORY ACTIVITIES	6	3	6	11	6	12	12
E PERFORMING RESPIRATORY THERAPY ACTIVITIES	17	26	21	11	17	*	*
F PERFORMING POLYSOMNOGRAM ACTIVITIES	*	*	*	*	6	2	16
G PERFORMING ADMINISTRATIVE OR SUPPLY ACTIVITIES	7	5	5	8	7	4	2
H PERFORMING MEDICAL READINESS ACTIVITIES	3	2	2	5	4	4	3
I PERFORMING TRAINING ACTIVITIES	6	11	8	5	22	19	19
J PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	14	13	18	17	29	27	20

* Indicates less than 1%
Note: Columns may not add up to 100% due to rounding

TABLE A18

JOB SATISFACTION INDICATORS FOR IDENTIFIED JOB GROUPS
(PERCENT MEMBERS RESPONDING)

		CARDIOPULMONARY CLUSTER				
	CARDIO-PULMONARY CLUSTER (STG 4)	Respiratory Therapy Job (STG 13)	Pulmonary Laboratory Job (STG 14)	NCOIC Job (STG 17)	Non-Invasive Cardiology Job (STG 9)	**SUPERVISION AND MANAGEMENT IJ (STG 7)**
EXPRESSED JOB INTEREST						
INTERESTING	**83**	86	73	93	62	**100**
SO-SO	**11**	9	20	4	23	**0**
DULL	**6**	6	7	4	15	**0**
PERCEIVED USE OF TALENTS						
EXCELLENT TO PERFECT	**22**	23	13	32	15	**42**
FAIRLY WELL TO VERY WELL	**68**	71	67	64	62	**58**
NONE TO VERY LITTLE	**9**	6	20	4	23	**0**
PERCEIVED USE OF TRAINING						
EXCELLENT TO PERFECT	**21**	17	20	32	15	**50**
FAIRLY WELL TO VERY WELL	**69**	77	60	61	69	**42**
NONE TO VERY LITTLE	**9**	6	20	7	15	**8**
SENSE OF ACCOMPLISHMENT FROM JOB						
SATISFIED	**46**	57	53	46	59	**52**
NEUTRAL	**35**	27	30	35	21	**25**
DISSATISFIED	**19**	16	17	19	20	**22**
REENLISTMENT INTENTIONS						
YES OR PROBABLY YES	**74**	77	67	79	54	**83**
NO OR PROBABLY NO	**15**	11	27	11	23	**17**
WILL RETIRE	**12**	11	7	11	23	**0**

Note: Columns may not add up to 100% due to rounding

TABLE A19

COMPARISON OF JOB SATISFACTION INDICATORS
BETWEEN CURRENT AND 2000 SURVEYS
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS' TAFMS		49-96 MONTHS' TAFMS		97+ MONTHS' TAFMS	
	2003 4H0X1 (N=16)	2000 4H0X1 (N=57)	2003 4H0X1 (N=32)	2000 4H0X1 (N=48)	2003 4H0X1 (N=61)	2000 4H0X1 (N=98)
EXPRESSED JOB INTEREST						
INTERESTING	75	88	84	81	89	80
SO-SO	6	8	16	13	7	11
DULL	19	4	0	6	5	9
PERCEIVED USE OF TALENTS						
EXCELLENT TO PERFECT	6	NA	25	NA	30	NA
FAIRLY WELL TO VERY WELL	75	82	69	85	64	81
NONE TO VERY LITTLE	19	18	6	15	7	19
PERCEIVED USE OF TRAINING						
EXCELLENT TO PERFECT	13	NA	19	NA	31	NA
FAIRLY WELL TO VERY WELL	75	88	75	83	59	79
NONE TO VERY LITTLE	13	12	6	17	10	21
SENSE OF ACCOMPLISHMENT FROM WORK						
SATISFIED	69	70	72	75	79	70
NEUTRAL	13	18	22	6	11	11
DISSATISFIED	19	12	6	19	10	19
REENLISTMENT INTENTIONS						
YES OR PROBABLY YES	44	49	59	44	56	65
NO OR PROBABLY NO	56	51	41	56	11	7
WILL RETIRE	0	0	0	0	33	28

Note: Columns may not add up to 100% due to rounding
Note: "NA" indicates data not available. The 2000 study combined the "excellent to perfect" and "fairly well to very well" responses.

TABLE A20

COMPARISON OF REENLISTMENT FACTORS BY TAFMS GROUPS – PERCENT OF RESPONDENTS SELECTING EACH FACTOR AND AVERAGE SCORE AMONG THOSE SELECTING EACH FACTOR

31 FACTORS LISTED IN ORDER OF APPEARANCE IN SURVEY Scale: 1 = Slight Influence; 2 = Moderate Influence; 3 = Strong Influence	1-48 MONTHS' TAFMS (N=7)		49-96 MONTHS' TAFMS (N=19)		97+ MONTHS' TAFMS (N=34)	
	Percent Selecting	Average	Percent Selecting	Average	Percent Selecting	Average
MILITARY LIFESTYLE	57	1.75	37	2.14	59	2.45
PAY AND ALLOWANCES	71	2.00	42	2.12	68	2.52
BONUS OR SPECIAL PAY	0	0.00	21	3.00	21	2.71
RETIREMENT BENEFITS	43	2.67	47	2.33	76	2.85
MILITARY-RELATED EDU & TRNG OPPORTUNITIES	100	2.43	68	2.00	56	2.16
OFF-DUTY EDU OR TRAINING OPPORTUNITIES	43	3.00	42	2.38	47	2.44
MEDICAL/ DENTAL CARE FOR AD MEMBER	71	2.80	63	2.42	56	2.89
MEDICAL/ DENTAL CARE FOR FAMILY MEMBERS	43	3.00	47	2.56	68	2.87
BASE HOUSING	0	0.00	21	1.50	24	2.00
BASE SERVICES	14	1.00	26	2.00	24	2.12
CHILDCARE NEEDS	14	1.00	21	2.00	15	2.40
SPOUSE'S CAREER	14	1.00	5	3.00	12	1.50
CIVILIAN JOB OPPORTUNITIES	0	0.00	16	3.00	9	2.00
EQUAL EMPLOYMENT OPPORTUNITIES	0	0.00	11	2.50	24	2.12
NUMBER OF PCS MOVES	14	2.00	21	2.25	12	2.00
LOCATION OF PRESENT ASSIGNMENT	0	0.00	32	2.67	35	2.58
NUMBER/DURATION OF TDYS OR DEPLOYMENTS	29	1.50	5	3.00	15	2.60
WORK SCHEDULE	14	2.00	42	2.62	29	2.20
ADDITIONAL DUTIES	14	1.00	5	2.00	21	2.57
JOB SECURITY	57	2.75	47	2.78	71	2.79
ENLISTED EVALUATION SYSTEM	0	0.00	11	2.50	15	2.80
PROMOTION OPPORTUNITIES	14	3.00	32	2.00	32	2.82
TRAINING/EXPERIENCE OF UNIT PERSONNEL	14	2.00	21	2.50	9	2.33
UNIT MANNING	0	0.00	5	3.00	15	2.60
UNIT RESOURCES	0	0.00	5	3.00	9	2.00
UNIT READINESS	0	0.00	0	0.00	9	2.33
RECOGNITION OF EFFORTS	14	2.00	26	2.40	35	2.00
ESPRIT DE CORPS/MORALE	29	2.50	26	2.40	38	2.23
LEADERSHIP OF IMMEDIATE SUPERVISOR	14	3.00	21	2.50	29	2.20
LEADERSHIP AT UNIT LEVEL	0	0.00	16	3.00	18	2.00
SENIOR AIR FORCE LEADERSHIP	14	3.00	11	2.50	15	2.40

TOP 5 REASONS FOR MEMBERS REENLISTING BY TAFMS GROUPS

1-48 MONTHS' TAFMS (N=7)	49-96 MONTHS' TAFMS (N=19)	97+ MONTHS' TAFMS (N=34)
MILITARY-RELATED EDU & TRNG OPPORTUNITIES	MILITARY-RELATED EDU & TRNG OPPORTUNITIES	RETIREMENT BENEFITS
MEDICAL/ DENTAL CARE FOR AD MEMBER	MEDICAL/ DENTAL CARE FOR AD MEMBER	**JOB SECURITY**
PAY AND ALLOWANCES	**JOB SECURITY**	MEDICAL/ DENTAL CARE FOR FAMILY MEMBERS
JOB SECURITY	MEDICAL/ DENTAL CARE FOR FAMILY MEMBERS	PAY AND ALLOWANCES
MILITARY LIFESTYLE	RETIREMENT BENEFITS	MILITARY LIFESTYLE

TABLE A21

COMPARISON OF SEPARATION FACTORS BY TAFMS GROUPS – PERCENT OF RESPONDENTS SELECTING EACH FACTOR AND AVERAGE SCORE AMONG THOSE SELECTING EACH FACTOR

31 FACTORS LISTED IN ORDER OF APPEARANCE IN SURVEY Scale: 1 = Slight Influence; 2 = Moderate Influence; 3 = Strong Influence	1-48 MONTHS' TAFMS (N=9)		49-96 MONTHS' TAFMS (N=13)		97+ MONTHS' TAFMS (N=7)	
	Percent Selecting	Average	Percent Selecting	Average	Percent Selecting	Average
MILITARY LIFESTYLE	67	2.00	38	2.00	57	2.50
PAY AND ALLOWANCES	67	1.67	38	2.00	57	2.50
BONUS OR SPECIAL PAY	11	3.00	46	1.83	43	2.00
RETIREMENT BENEFITS	0	0.00	31	2.00	29	2.00
MILITARY-RELATED EDU & TRNG OPPORTUNITIES	11	3.00	8	1.00	14	2.00
OFF-DUTY EDU OR TRAINING OPPORTUNITIES	22	3.00	38	3.00	29	2.50
MEDICAL/ DENTAL CARE FOR AD MEMBER	11	3.00	8	3.00	0	0.00
MEDICAL/ DENTAL CARE FOR FAMILY MEMBERS	0	0.00	0	0.00	14	3.00
BASE HOUSING	11	1.00	8	1.00	29	1.50
BASE SERVICES	0	0.00	0	0.00	14	1.00
CHILDCARE NEEDS	11	3.00	8	3.00	14	3.00
SPOUSE'S CAREER	11	2.00	15	2.50	14	3.00
CIVILIAN JOB OPPORTUNITIES	44	2.25	46	2.67	43	3.00
EQUAL EMPLOYMENT OPPORTUNITIES	11	1.00	0	0.00	0	0.00
NUMBER OF PCS MOVES	22	2.50	15	2.00	0	0.00
LOCATION OF PRESENT ASSIGNMENT	33	2.33	15	2.00	43	2.00
NUMBER/DURATION OF TDYS OR DEPLOYMENTS	0	0.00	38	2.80	29	2.50
WORK SCHEDULE	33	2.33	15	2.50	14	2.00
ADDITIONAL DUTIES	22	2.50	38	2.40	0	0.00
JOB SECURITY	0	0.00	0	0.00	0	0.00
ENLISTED EVALUATION SYSTEM	11	3.00	23	2.33	29	2.00
PROMOTION OPPORTUNITIES	22	2.50	15	3.00	29	3.00
TRAINING/EXPERIENCE OF UNIT PERSONNEL	22	2.00	8	1.00	14	3.00
UNIT MANNING	56	2.40	54	2.43	57	2.75
UNIT RESOURCES	11	3.00	15	2.00	14	3.00
UNIT READINESS	0	0.00	23	2.00	29	2.50
RECOGNITION OF EFFORTS	44	2.50	46	2.83	71	2.40
ESPRIT DE CORPS/MORALE	33	2.67	38	2.80	43	2.67
LEADERSHIP OF IMMEDIATE SUPERVISOR	33	2.33	23	2.67	43	3.00
LEADERSHIP AT UNIT LEVEL	22	2.50	38	2.80	14	3.00
SENIOR AIR FORCE LEADERSHIP	11	3.00	8	3.00	29	3.00

TOP 5 REASONS FOR MEMBERS SEPARATING BY TAFMS GROUPS

1-48 MONTHS' TAFMS (N=9)	49-96 MONTHS' TAFMS (N=13)	97+ MONTHS' TAFMS (N=7)
MILITARY LIFESTYLE	**UNIT MANNING**	**RECOGNITION OF EFFORTS**
PAY AND ALLOWANCES	**RECOGNITION OF EFFORTS**	**UNIT MANNING**
UNIT MANNING	**CIVILIAN JOB OPPORTUNITIES**	MILITARY LIFESTYLE
RECOGNITION OF EFFORTS	BONUS OR SPECIAL PAY	PAY AND ALLOWANCES
CIVILIAN JOB OPPORTUNITIES	OFF-DUTY EDU OR TRAINING OPPORTUNITIES	**CIVILIAN JOB OPPORTUNITIES**